

REMARKS/ARGUMENTS

Prior to the amendments presented herewith, claims 1, 7-16, 19, 20, 28, 29, 32-38 and 48 were pending. Claims 1, 7, 9, 11, 13, 19, 20 and 38 are being amended. Claims 2-6, 16-18, 21-27, 30, 31, 39-47 and 49 are being cancelled. Accordingly, after the present amendments have been entered, claims 1, 7-15, 19, 20, 28, 29, 32-38 and 48 will be pending.

1. Information Disclosure Statements

Applicants thank the Examiner for acknowledging the Information Disclosure Statements filed on 1/23/2007, 1/8/2007, and 2/1/2007.

Applicants note that two further supplemental Information Disclosure Statements were filed on 4/5/2007 and 7/05/2007, after the mailing date of the present Office Action.

2. Election/Restriction

Claims 1 and 38 are being amended to delete the phrase "or two R₁₂ are taken together to form a ring fused or bridged to the ring formed by J, K, L and M," as suggested by the Examiner.

Applicants reserve the right to petition for rejoinder under 37 C.F.R. § 1.144 with regard to the non-elected claims, once the elected claims are placed in condition for allowance. Applicants also reserve the right pursuant to 35 U.S.C. § 121 to file one or more divisional applications directed to the non-elected subject matter during the pendency of the present application.

3. Claim Rejections Under 35 USC § 102

Claims 1, 29 and 37 are rejected as allegedly being anticipated by WO 00/066584 (Guadilliere *et al.*). In addition, claims 1, 28, 32 and 37 are rejected as allegedly being anticipated by Lakhan *et al* (*Journal of Indian Chemical Society* (1987), 64 (5), 316-18). Claims 1, 28, 32 and 37 are rejected as allegedly being anticipated by Shyam *et al.* (*Current Science* (1975), 44(16), 562-4). Further, claims 1, 28, 32 and 37 are rejected as allegedly being anticipated by Tiwari *et al.* (*Indian of Journal of Pharmaceutical Sciences* (1978), 40(2), 40-3). Claims 1, 12, 29, 32 and 37 are rejected as allegedly being anticipated by U.S. Pat. No. 7,161,002 (Bergnes *et al.*).

a. WO 00/066584 (Guadilliere *et al.*)

With respect to WO 2000/066584, the compound referred to by the Examiner as allegedly anticipating the present claims (3-benzyl-6-bromo-3,4-dihydro-quinazolin-4-one) does not meet the definition of R₂ in the pending claims.¹ In addition, claim 1 is being amended to remove -N(H)- and -N(R₉)- from the definition of U. Accordingly, the rejection under 35 USC §102 in view of WO 2000/066584 (or US 6,747,035) should be withdrawn.

b. Lakhan *et al.* (Journal of Indian Chemical Society (1987), 64 (5), 316-18) and Shyam *et al.* (Current Science (1975), 44(16), 562-4)

In addition, the definition of U in claims 1, 19 and 20 is being amended to delete reference to -SCH₂CH₂-. Since Lakhan *et al.* and Shyam *et al.* only describe relevant compounds wherein U is -SCH₂CH₂-, the rejection with respect to Lakham *et al.* and Shyam *et al.* is believed to be overcome.

c. Tiwari *et al.* (Indian of Journal of Pharmaceutical Sciences (1978), 40(2), 40-3)

The definition of U in claims 1, 19 and 20 is being amended to delete reference to -CH₂-NH-CO-. Since Tiwari *et al.* only describes relevant compounds wherein U is -CH₂-NH-CO-, the rejection with respect to Tiwari *et al.* is believed to be overcome.

d. U.S. Pat. No. 7,161,002 (Bergnes *et al.*)

With respect to Bergnes *et al.*, the definition of U in claims 1, 19 and 20 is being amended to delete reference to -CHR₉-. Since Bergnes *et al.* only describes relevant compounds wherein U is -CHR₉-, the rejection with respect to Bergnes *et al.* is believed to be overcome.

¹ In addition, the Examiner indicates that US 6,747,035 is equivalent to WO 2000/066584, and proceeds to cite to column 22, lines 32-48 of US 6,747,035 to form the basis of the rejection. However, WO 2000/066584 and US 6,747,035 are *not* equivalent. In fact, US 6,747,035 cites to WO 2000/066584 when describing the synthesis of 3-benzyl-6-bromo-2-hydrazino-3,4-dihydro-quinazolin-4-one (see column 22, lines 31-33 of US 6,747,035).

In light of the foregoing, the rejection of claims 1, 12, 28, 29, 32 and 37 under 35 USC §102 should be withdrawn.

4. Claim Rejection Under 35 USC § 103

Claims 1, 19, 20, 28, 29, 32 and 37 are rejected as being unpatentable over Chenard *et al.* *J. Med. Chem.* 2001, 44, 1710-1717. In making the rejection, the Examiner acknowledges that the compounds of Chenard *et al.* differ from the presently claimed compounds in that the substituents at the 2-position of the quinazolinones of Chenard *et al.* are substituted phenyl rings **and not** benzyl groups, as required by the pending claims. The Examiner then goes on to dismiss these differences as being obvious by alleging that a compound with a benzyl substituent is a homologue of a compound with a phenyl substituent. However, those skilled in the art would understand that “homologues” refer to compounds having a similar general formula that possess similar chemical properties (*see*, http://en.wikipedia.org/wiki/Homologous_series, copy attached). Due to the high degree of unpredictability in the chemical arts, those skilled in the art would expect phenyl-substituted quinazolinones and benzyl-substituted quinazolinones (with their methylene linkages between the phenyl ring and the quinazolinone) to have significantly different activities as protein inhibitors. In particular, because the phenyl ring of the benzyl substituent extends out from the quinazolinone further than the phenyl substituent, one would **not** expect the benzyl-substituted quinazolinones and phenyl-substituted quinazolinones to have the same protein inhibition properties. As such, the benzyl-substituted quinazolinones are **not** mere homologues of the phenyl-substituted quinazolinones of Chenard *et al.* Further, Applicants note that Chenard *et al.* is directed to AMPA receptor antagonists and does not suggest DPP-IV activity. In light of the foregoing, the rejection of claims 1, 19, 20, 28, 29, 32 and 37 under 35 USC §103 should be withdrawn.

5. Claim Rejections Under 35 USC § 112

Claims 1, 7-16, 19, 20, 28, 29, 32-38 and 48 are rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to the terms “aldehyde”, “amide”, “ester”, “iminoketone” and “ketone,” Applicants respectfully submit that those skilled in the art would readily understand that the these terms, when used as part of a Markush group to describe possible substituents, refer to radicals derived from aldehydes, amides, esters, iminoketones and ketones. However, solely for the purpose of advancing prosecution of the present application, claims 1 and 38 are being amended to recite that the substituents include “monovalent radicals derived from aldehydes, amides, esters, iminoketones and ketones.”

With respect to the term “oxo,” inclusion of radicals derived from aldehydes and ketones obviates the need for the term “oxo” in the list of possible substituents. Accordingly, claims 1 and 38 are also being amended to delete reference to oxo in the Markush groups.

The Examiner rejects claim 38 apparently on the basis that the term “aryl” is not clear. In making the rejection, the Examiner appears to suggest that use of the term “aryl” is improper because it is “used for the sake of abbreviation or generalization.” Applicants respectfully disagree. During patent examination, the pending claims *must* be “given their broadest reasonable interpretation consistent with the specification.” MPEP 2111 citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) (emphasis added). Here, those skilled in the art would readily understand that the term “aryl” refers to groups derived from arenes (*i.e.*, monocyclic and polycyclic aromatic hydrocarbons) by removal of a hydrogen from a ring carbon atom. All the Examiner has done is to allege that the term “aryl” is broad. But, breadth of a claim is *not* to be equated with indefiniteness. MPEP 2173.04 citing *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971). If the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 USC § 112, second paragraph. Here, the subject matter of the claims is clear since, in fact, the Examiner has shown an understanding of the term “aryl” as it is used in the art.

The cancellation of claim 16 renders the rejection of that claim moot.

Claims 1, 9 and 13 are being amended to replace the terms “comprising” and “comprises” with the term “selected from the group consisting of” or the term “having,” in accordance with the Examiner’s suggestion.

Claims 1, 7, 11 and 38 are being amended to replace the term “thio” with the term “monovalent radicals derived from thiols,” in accordance with the Examiner’s suggestion

Accordingly, the rejections under 35 USC §112, second paragraph, are believed to be overcome.

6. Double Patenting

The Examiner has provisionally rejected claims 1, 7-16, 19, 20, 28, 29, 32-38 and 48 under the doctrine of non-statutory obviousness-type double patenting as allegedly being unpatentable over select claims of copending Application Nos. 10/809,636; 10/809,635 and 10/809,637. Applicants thank the Examiner for indicating approval of Applicants intent to address the rejections when one or more of the applications are otherwise in condition for allowance.

7. Miscellaneous Claim Amendments

Claims 19 and 20 are being amended to be in independent form.


CONCLUSION

Applicants earnestly believe that they are entitled to a letters patent, and respectfully solicit the Examiner to expedite prosecution of this patent application to issuance. Should the Examiner have any questions, the Examiner is encouraged to telephone the undersigned.

Respectfully submitted,

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